What is claimed is:

1. A method for compressing an image, comprising the steps of:

performing a wavelet transformation of the

5 image;

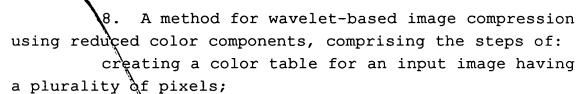
and

quantizing the wavelet transformed image; applying entropy coding to the quantized image;

outputting a file that includes the entropy 10 coded image.

- 2. The method of claim 1, further comprising the following step: performing a color transformation of the image.
- 3. The method of claim 1, further comprising
 15 the following step:

 performing the wavelet transformation using an integer wavelet transform.
- 4. The method of claim 3, further comprising: deriving the integer wavelet transform using a 20 lifting scheme.
 - 5. The method of claim 3, further comprising: deriving the integer wavelet transform using a correction method.
- 6. The method of claim 1, wherein the step of quantizing includes the sub-step of: processing the wavelet transformed image using sub-band oriented quantization.
- 7. The method of claim 1, further comprising: comparing the wavelet transformed image to at 30 least one predetermined threshold value.



5 calculating an index for each of the pixels, whereby generating a plurality of indices;

performing a wavelet transformation on the indices;

applying entropy coding on the transformed 10 indices; and

outputting à file that includes the entropy coded indices.

- 9. The method of claim 8, further comprising: dithering the pixels to generate the indices.
- 10. The method of claim 8, further comprising: partitioning a large image into a plurality of small images to produce the input image.
 - 11. The method of claim 10, wherein the large image is selectively partitioned.
- 20 12. An image processing system, comprising: means for performing a wavelet transformation on an input image;

means for quantizing the wavelet transformed
image;

- 25 means for entropy coding to the quantized image; and
 - means for outputting the entropy coded image.
 - 13. The image processing system of claim 12, further comprising:
- means for receiving the entropy coded image; means for entropy decoding the received image; means for de-quantizing the decoded image; and

means for performing an inverse wavelet transformation on the de-quantized image to produce an output image.

14. The image processing system of claim 12,
5 further comprising:

means for displaying the output image.

15. The image processing system of claim 12, further comprising:

means for transmitting the entropy encoded image 10 over a communications medium.

16. An image compression system, comprising:
a compressor configured to generate a compressed
image based on an integer wavelet transform derived using
a technique selected from a lifting scheme and a
correction method.

- 17. The image compression system of claim 16, wherein the compressor quantizes a wavelet transformed image to produce the compressed image.
- 18. The image compression system of claim 16, 20 wherein the compressor entropy encodes a quantized image to produce the compressed image.
 - 19. The image compression system of claim 16, wherein the compressor performs a color transformation to produce the compressed image.
 - 20. An image decompression system, comprising: a decompressor configured to generate a decompressed image based on an integer inverse wavelet transform derived using a technique selected from a lifting scheme and a correction method.

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- 21. A computer-readable memory storing a computer program for directing a computer system to perform image compression, wherein the computer program implements steps for performing a wavelet transformation of an input image, quantizing the wavelet transformed image, applying entropy coding to the quantized image, and outputting a file that includes the entropy coded image.
- 22. A method of compressing a data file, 10 comprising the steps of:

performing a wavelet transformation of the data file to provide a series of wavelet coefficients;

quantizing those wavelet coefficients which fall above a predetermined threshold value to provide a quantized series of wavelet coefficients; and

compressing the quantized series of wavelet coefficients to provide a compressed data file.

- 23. The method of claim 22 wherein the compressing step comprises the step of applying an entropy coding to the quantized series of wavelet coefficients.
 - 24. The method of claim 23 wherein the entropy coding is selected from the group of arithmetic, Huffman, run length and Huffman run length combined.
- 25. The method of claim 23 further comprising the step of performing a color transformation of the data file prior to the wavelet transformation step.
- 26. The method of claim 25 wherein the 30 quantizing step comprises sub-band orientation quantization.

- 27. The method of claim 26 wherein the wavelet transformation step comprises integer wavelet transformation.
- 28. The method of claim 22 further 5 comprising the step of filtering the data file prior to the wavelet transformation step.
 - 29. The method of claim 27 wherein the integer wavelet transformation comprises biorthogonal filter method.
- 30. The method of claim 27 wherein the integer wavelet transformation comprises the correction method.
- 31. A compressed data file comprising a wavelet transformation of a data file having a series of compressed, quantized wavelet coefficients, the quantized wavelet coefficients having a value above a predetermined threshold value to provide a quantized series of wavelet coefficients.
 - 32. A program for compressing a data file comprising:
- a routine for performing a wavelet transformation of the data file to provide a series of wavelet coefficients;
- a routine for quantizing those wavelet coefficients which fall above a predetermined threshold value to provide a quantized series of wavelet coefficients; and
 - a routine for compressing the quantized series of wavelet coefficients to provide a compressed data file.